ABSTRACT

Oxidation resistant and burn resistant copper metal matrix composites are described. The copper metal matrix composites include matrix alloys which contain about 2.5 to about 6 weight percent aluminum, about 3 to about 30 weight percent of nickel or zinc, or a combination of about 30 to about 50 weight percent of nickel and zinc, with the balance being copper. Additionally, minor amounts of silicon, chromium, and titanium may also be present in the matrix alloy. The copper alloy matrix is optionally reinforced with about 15 to about 70 volume percent of ceramic particulates, whiskers or fibers.